

Notice of Allowability

Application No.

09/966,482

Examiner

Jakieda R Jackson

Applicant(s)

WANG ET AL.

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 13, 2005.
2. ☒ The allowed claim(s) is/are 1-58 (now 1-12, 26-30, 13-25 and 31-58, respectively).
3. ☒ The drawings filed on 21 March 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

W. R. YOUNG
PRIMARY EXAMINER

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed June 24, 2005, applicant submitted an amendment filed on September 13, 2005, in which the applicants amended claim 13 and requested reconsideration.

Response to Arguments

2. Applicant's argue that Touimi does not teach a confidence score calculator that calculates a confidence score for beat candidates using stored values of previous inter-onset intervals. Applicant's arguments see page 17, filed September 13, 2005, with respect to claim 13 have been fully considered and are persuasive. The rejection of claim 13 has been withdrawn.

Allowable Subject Matter

3. **Claims 1-58** are allowed.

The following is a statement of reasons for allowance:

As for independent claims 1, 31 and 45, they recite a method, encoder and decoder for detecting beats in a compression encoded audio bitstream. Prior art such as Marx and Kondo show similar methods, encoders and decoders but fails to teach the recited method determining a baseline position using modified discrete cosine transform (MDCT) coefficients obtained from the audio bitstream and deriving from the audio bitstream a window-switching pattern for sub-band sampling windows used to generate

the MDCT coefficients, to provide beat candidates for further evaluation and to perform beat tracking.

Dependent claims 2-12 and 18-58 are allowed because they further limit their parent claims.

As for independent claim 13, it recites a beat detector suitable for placement into an audio device conforming to a compression encoded audio transmission protocol. Prior art teaches a beat detector, but fails to teach the recited beat detector including a modified discrete cosine transform coefficient and a confidence calculator receiving input from the at least one band feature value analyzer, the confidence score calculator calculating a confidence score for beat candidates using stored values of previous inter-onset intervals, for an improved determination of beat position and to score the reliability of the beat candidate.

Dependent claims 14 and 15 are allowed because they further limit their parent claims.

As for independent claims 16 and 17, they recite an audio encoder and decoder suitable for use with a compression-encoded audio transmission protocol. Prior art teaches similar encoders and decoder, but fails to teach a beat detector including a modified discrete cosine transform coefficient and a confidence calculator, for an improved determination of beat position and to score the reliability of the beat candidate.

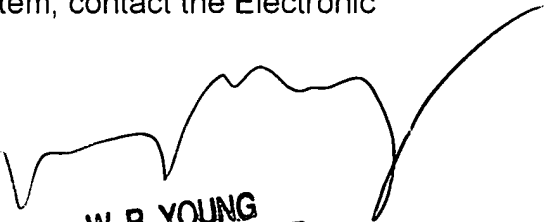
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R. Jackson whose telephone number is 571.272.7619. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571.272.7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRJ
November 16, 2005


W. R. YOUNG
PRIMARY EXAMINER